PROFILE OF THE FREEWAY PLANNING PROCESS

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FOREWORD

In the city planning agency of Zurich where I worked three years as traffic-engineer and transportation-planner, I got involved in various projects of road-network improvements, regional balanced transportation study and complicated intersection design, implementing pedestrian zones or station-location for the planned subway line. Success or failure of the planner's idea versus commanding figures and facts presented by operational agencies often was a result of puzzling actions or unforeseen moves by politicians. Therefore, I wanted to use the opportunity of my study-year here at Wayne State University to look at some aspects in the process of decision-making in the field of freeway planning.

I believe that it is very important for any participant or outside observer of such a planning process to get to understand the role of the different actors, the kind of existing relationships and the timing implied. This knowledge may enable everyone to perform his role effectively, in the sense that the relevant ideas, considerations and facts may be presented at the right time to the right person.

I have chosen the case-study approach in order to simplify the data-gathering process. Speaking about a "real world situation" I looked for an inner-urban freeway which is part of the Interstate

system in the United States, as well as a counterpart in Switzerland which is part of the Swiss National Highway System. The Walter P. Chrysler Freeway in Detroit, northgoing part of the Interstate Route I-75, has been completed recently and opened to traffic in late 1969 in the city of Detroit. That seemed to me to have the advantage that most of the interesting decisions, discussions and the evaluative planning work undertaken still is remembered by the people involved therein. The "Sihl-Expressstrasse" in Zurich is the innermost part of the "Swiss national highway No. 3" connecting Zurich with the south-east alpine regions.

The planning work on this Swiss expressway, as on the whole inner-city network, has not been finished yet. Up to now, there is no expressway open to traffic in the city of Zurich, with the exception of one short leg of interurban freeway reaching into the city.

Both expressways are designated to traverse the city and to touch the fringe of the Central Business District. Furthermore, both are part of a national system with large federal funding and involvement of all three levels of government in the planning. Also the enabling federal legislation was introduced in the same year, namely 1956. But the principal reasons for this are naturally completely different and so are the reactions of the communities.

Introduction

The freeway in the American urban centers is to me the most visible single object which shows impressively the dominant role of the automobile in the transportation system or even in the style of life. As an outside spectator one is really surprised about the scale of these traffic facilities as a whole, both in terms of traffic counts (270,000 to 320,000 vehicles per day at the Lodge/Ford Interchange) as well as in terms of physical lay-out (86 acres for the Lodge/Ford Interchange or 300 foot wide rights-of-way as the standard measure along the Chrysler Freeway) and traffic operation (directional four-story interchanges, entrance/exit ramps close to 1/2 mile apart, two to three-lane service drives on both sides of the freeway itself). And these freeways are in real use 24 hours a day (even at 2 o'clock in the morning 100 vehicles per hour and lane!).

As a technician and as a car driver one might admire the skilled and obviously successful work which has been done in a short period of time. One might also be very content about the fact that, at least in Detroit, the urban freeway network together with the thoroughly organized and signalized surface street system has speeded up considerably traffic to and from the major central activity centers (Downtown-CBD, New Center Area, Northland, Rouge Complex) and their residential "hinterland" (now covering at least 1500 square miles). It is also very satisfying to know that this

increase of commodity has been accompanied with an increase in traffic safety (1969 had 40% less accidents per 100 million vehicle miles as compared to 1950; the freeway system having only 1/3 the ratio of the surface street system). As a politician one might also be happy because of the visibly achieved results for the electorate (150 freeway miles opened to traffic in the area since 1945) because of the positive effects upon the construction industry and therefore the good chances to get re-elected. As a planner finally, you might agree with some of the above mentioned effects and you might add the increased mobility, the rapid growth of the whole area due to this, the development from the one-center area to the multi-center region. But also promptly you would have to point out several undesirable consequences, like the promoted urban sprawl, the city's loss of tax base by tracing broad freeways through build-up land, the disruption of neighborhoods by the relocation means, or the destruction of parks and green open space.

In effect, what I have said already only represents the point of view of the ruling majority. I have not said anything about the effects on less advantaged segments of the population, e.g. the urban poor which cannot afford a car to make use of the possibilities of increased mobility, though they have to bear the load of noise, pollution and the interruption within neighborhood communities, along major commuter streets or the freeway routes

at least as much as the users themselves. Also I do not want to get into the crucial problems related to the effects on the housing stock as a whole, or the diminishing of special housing categories.

Having touched some of the issues which are included among a lot of others in the "freeway controversy" in recent years in the U.S., I will briefly turn to the situation in Switzerland with regard to transportation. Most important, the existing transportation system is a mixed one, that is to say it uses highways and railroad tracks extensively. Up to now there is no urban freeway built and in operation yet. The access to the core city in Zurich for regional residents is made up today by some 20 two-lane highways and seven major railroad tracks. The latter offer an average of 220 daily commuter trains all together. But the "transportation controversy" as I would like to call it in distinction from the American "freeway controversy" is well under way already. As I will show later on, it is for very different reasons. Above all it is the fact that land is scarce and therefore precious not only in money terms, but as a matter in itself. As a logical consequence the use of land in every sense (physical, social, spiritual) is more intense than in the American Midwest for example. People in Switzerland therefore are well aware of the different impacts for the necessary land areas to be devoted to one mode of transportation as compared to the others (e.g. capacity per single lane in

persons or tons per time or overall network capacity per square mile). Together with this general feeling that land as such shall not be spoiled, the discussions in the current "transportation controversy" focus to quite an extent on the questions of priorities in a wider range: Which transportation system does the least damage to our physical and social environment.

Since all trains in Switzerland are electrically powered (the electric energy being produced to 82% in hydro-power plants, 14% in nuclear-power plants and only 2% in thermo-power plants in 1971), less land consuming, reasonably priced, frequent and dependable, it is not surprising that an important segment of the population is in favor of public rail transit improvements versus freeway extensions into the core city. To be complete I have to admit though that the car ownership ratio is still growing fast (about 290 cars/1000 population in 1970) and that many Swiss share the feelings of their love affair with the automobile with their fellow Americans and that several interest groups are pushing the government and planners of all levels for faster and more highway construction.

What kind of decisions and actions have developed out of these circumstances? With my look at the planning process and its background in the two case studies in this paper, I will explain it from my point of view as a visiting fellow in Detroit as well

as that of a transportation planner in Zurich. My motivation for doing this lies in the recognition that any active participant in today's planning process, besides sound professional training, has to get better knowledge or sometimes even the feeling, where his field of action shall be or where he will have to intervene to present his problem analysis and his proposed alternative solutions. Still the final decision-making power has to vest with the politicians, they being the elected officials and representatives of their electorate, or with the citizens at large in the case wherever constitutional rights in this field are provided.

I. The Case of the Chrysler Freeway in Detroit

1. The situation in the United States

When in 1956 the congress of the United States voted in favor of the "Interstate and Defense Highway Act" to construct a 41,000 mile network of limited access super highways for the estimated cost of $26 billion to be completed within approximately 15 years, the largest public road building program ever in the history of mankind got started. It represents the logical successor of the previous federal Highway Acts dating back to 1916 using the same basic rationale, that is, to enhance the national economy by providing road access to as many regions and places of the country as possible. The 1956 Highway Act was aimed to lace the country with a high standard network of limited access divided highways which would not only interconnect all towns of 50,000 population and over, but also serve intra-metropolitan and trans-metropolitan traffic. The last point is important because in all the previous legislation for federal aid highway systems, there was a very strong rural bias fed by the fear that funds could be diverted from the rural areas to the urban areas. This simply reflects the fact that the American legislature in general is strongly rural based and oriented.

It is interesting to note how the final set up for the 1956 Highway act emerged. It was in 1951 when the automotive, contracting, petroleum and trucking industries joined forces to begin a

publicity campaign entitled "Project Adequate Roads", promoting a national interstate system of freeways (as opposed to the idea of allowing private groups the extensive construction of toll roads). The news media, especially the Hearst chain, lent enthusiastic support. When in 1952 the Republicans returned to power, public pressure increased to fund such an interstate system. President Eisenhower and his advisor General Bragdon were impressed with the defense value of the "Autobahn" in Germany and wanted the interstate system designed for the same purpose, circumventing the big cities therefore rather than going through them. They were opposed by most of the state-level officials, the majors and pro-interstate lobby. In January 1955 the Clay report "Ten Year National Highway Program" recommended strongly that the Interstate system shall penetrate and serve urban areas. The finally passed Federal Aid Highway Act of 1956 accepted the latter concept. The act then set up the financing, introducing the Highway Trust Fund and authorizing the $26 billion on an attractive 90 percent federal sponsorship. The already established "federal state partnership" remained as before, with the state carrying out planning and construction within tight federal regulations.

The Federal Highway Act of 1956 established for the first time explicitly a tremendous road building program within urban areas. An estimated 6,000 miles of urban freeways of the 41,000 mile network is to assume roughly one-half of the total costs.

Naturally these urban portions also caused much more complicated work and much more troubles of all kinds before the eventual implementation.

Since the Interstate System got constructed mainly in the rural and flat lands at the beginning, it is not too surprising that only six years after the enabling act some form of work was completed or underway on 66 percent of the total Interstate mileage. The really grave problem was buried in the fact that by that time (1962) it had become apparent that much of the older planning done by the state highway departments after World War II had been fairly insensitive to the plans and objectives of local governments. Admittedly this is true partially because the local level of government did not define the community goals on behalf of transportation in general. The outcome of this unfortunate situation is the special inclusion in the Federal Aid Highway Act of 1962 requiring that after 1965 all state highway departments demonstrate that their planning is part of a "cooperative, comprehensive and continuing planning process", that is, to establish work links between the state and local planner. On the federal level it means the coordination of contracting planning grants of the two agencies most strongly involved herein: the Bureau of Public Roads and the Housing and Home Finance Administration. The evolution of federal aid highway planning and construction in urban areas has been a long and cumbersome process. The development

of the program has had an old rural bias and a "highway only" tradition. Also from its very beginning the program has had traded-in political intervention for all of its claims and aspirations against so-called technical objectivity. At least that way even the massive Interstate program has had a remarkably corruption free history, taken into account the decentralized nature of decision making and the huge sums of money involved.

The financing for all federal aid highway programs was put on a new formula in 1956. Since 1932 a federal gasoline tax existed for the general fund (one cent per gallon, increased to two cents per gallon in 1951). The new plan in 1956 called for the raising of the federal gas tax to three cents and, most important, to divert it past the general fund into a special Highway Trust Fund, where it would be released only for use in federal reimbursement of state highway construction. This federal trust fund, then, is not only the source of the 90 percent subsidy to the states for the Interstate program but also for the 50-50 funding for the state primary and secondary system. It is founded on the declared need to get the Interstate System built as rapidly as possible. The combination of the "highway only" philosophy with the means of a road user tax, a definitely regressive tax, has created what systems analysts would call "positive feedback". This increasing spiral of revenue (more highways, more use, more road user taxes paid) and the increase

of the tax rate to four cents per gallon in recent years generates a fund of never lacking capacity. The strong criticism and opposition known as the "freeway controversy" is at least partially a result of this financial situation. At a time when many of the other governmental service programs such as health, education, welfare, and housing are lacking the money to serve the needs or when the private railroad passenger services and the bus companies of all cities are losing money and have to diminish or abandon their service, the highway program with its trust fund has to be a target of concerned minority politicians or disadvantaged citizen groups.

2. The organization of the planning work

2.1 The federal level

Political bargaining and decision making in highway matters at the federal level lies in the legislative committees. In both legislative subcommittees on roads extensive political activity takes place, since the promotion of a new highway always has been advantageous for congressmen facing their electorate. These subcommittees, especially the House Subcommittee on Roads, have for years been dominated by long term Southern and Western congressmen. This has enhanced the "highway only" mentality and the long term fear that not enough money for spending in rural parts of the country is allocated.

Besides this only major political power block there is one governmental office in charge of policy making and coordination, that is the Federal Highway Administration. This office supervises the National Highway Safety Bureau and the Bureau of Motor Carriers Safety as well as the Bureau of Public Roads since 1966. The Federal Highway Administrator reports directly to the cabinet level secretary of Transportation. The FHWA, as it is referred to, is divided into nine regional offices, each with a regional director whose job it is to oversee the regulations and policy matters originating in the field.

The true power in the highway programs, however, lies within the Bureau of Public Roads (BPR). The central office in Washington D.C. is administered by a Director of Public Roads. His office reviews all allocations of the federal aid funds (especially the Highway Trust Fund), it handles the approval or revision of all plans, it maintains a research and planning staff and compiles its own publication "Public Roads". The Chief Engineer heads the organization of the division offices under Division Engineers in each of the fifty states plus the District of Columbia. The Division Engineers are those who work most closely with the state highway departments in preparing plans and proposals for the submission to the central office. It is here where the praised "federal-state partnership" actually works and where the true power is derived: dedicated civil service technicians establishing

long term working relationships and putting their effort together to maintain the image of high technical work. This explains also the existing esprit de corps, in the BPR.

2.2 The state level

The state legislature usually has a politically powerful lever over the state highway department through the control of the state's revenue for matching federal aid construction funds. This is even the case in the many states (e.g. Michigan) which have followed the federal model in setting up a state highway trust fund fed by road user taxes, because appropriations of the trust fund usually come up for legislature review and approval every two years. Similar to the federal level too, the bargaining and politicking takes place in the legislative committees for mostly the same reasons (good "back-home record" for the politician, rural bias of the most state legislatures). In addition to this, close relationships seem to exist in states between the legislative committee members and the staff of the state highway department.

All fifty state governments include a state highway department which is the designated agency legally required to administer all federal aid funds in its jurisdiction. All public highways built under the A - B - C program (primary and secondary road system) and the Interstate program are fully owned and maintained by the respective state government, represented through the state highway department. These departments usually are headed by a commission of three

to seven members, appointed in staggering and long terms by the governor. The commission then appoints the chief engineer to carry out the work with his staff. In Michigan the situation was somewhat different before 1965 when the Highway Commissioner got publicly elected in the state at large (requirement: registered engineer) for a four year term, being therefore responsible directly to the public and not to the governor. Since 1965 Michigan has also established the commission form. With respect to the Detroit scene it is interesting to note that in 1957 the candidate got elected as Highway Commissioner who had told during his campaign that he would intensify road construction in the cities (Commissioner Mackie). Besides these leading people in top of the highway department, which can be replaced due to political changes in state government, the department is staffed by state civil service technicians, managers and accountants who plan, design, and supervise new construction and who administer the maintenance of existing state highways. The close working relationship with the staff of the respective BPR division office enables these middle management men to carry out major policies and plans often with little interference from the more transient officials such as governors or highway directors. Herein lies the power and parochialness of the highway programs.

It is only since the Federal Aid Highway Acts of 1962 and 1968 that a consistency with local plans is required. The law only

provided for one public hearing concerning the route allocation of a federal aid highway. But these hearings were mostly understood as a means of information and it stayed in the discretion of the highway department how much weight it would give the public opposition expressed at such a hearing. There is no legal requirement to change the presented plans because of the unfavorable comments given on a public hearing. Only since 1966 has the possibility to set up arbitrary boards for issues on the Interstate System existed in Michigan. The arbitration members are picked up by the governor. The only possibility to avoid an open conflict in case of strong disagreement was not to build the respective highway at all. With respect to the cities in Michigan, however, there is a state law establishing the necessity to get the approval of the respective local legislature (e.g. the Common Council in the case of Detroit) before construction work is allowed to start. It all depends therefore upon the ability and sensitivity of the state highway engineers if the results are satisfactory to all levels of government as well as to the people. (Route allocation work is done completely by government employees, 25% of design work is given to private firms).

2.3 The municipal level

Country-wide speaking local governments often find themselves embarrassingly powerless and ineffective when it comes to highway location decisions. The state highway department's right of eminent

domain in effect renders the city officials without an official review power over decisions of major consequence to the city. Michigan, however, provides with the already mentioned state law for this official review power, and it is common practice in this state to reconsider plans if problems arise instead of cutting off the dialogue. It depends to a great degree on the relationships and contacts between city officials and state representatives how significant pressures can be brought into effect to alter plans to meet municipal objectives. The crucial question then comes up of whether or not the city has defined its objectives in terms of transportation and land use planning. It apparently looks to be the case quite well in Detroit, where the City Department of Public Works and the City Plan Commission had designed freeway corridors in the late 1940's already to be included in the city's Master plan. It is at least striking to observe that over the years these routes have been steadily maintained, confirmed by major planning efforts like the 1953 Detroit Metropolitan Area Traffic Study, 1965 Transportation and Land Use Study, TALUS, or the privately financed Doxiadis report. It was only in three cases in the city of Detroit that the state highway department's plans were strongly opposed by private citizen groups or the city government. Since there exists again a close working relationship between the technicians in the city departments of Public Works, Police, and Streets and Traffic with their counterparts in Wayne

County and the state, this is not too surprising. That their did and does not exist a major conflict between all these highway engineers on the one side and the Mayor, the Common Council and others more concerned with overall effects on the community (loss of tax base, moving people, cutting neighborhoods, etc.) on the other side, is at least partially the result of the overall accepted goal to build an extensive freeway system in the city in order to serve the needs of a one-mode transportation system.

3. The role of citizen participation

The federal aid highway acts, dating back to 1914 as well as the numerous legal acts in all the states in this matter were enacted by the legislature, the publicly elected representatives of the people. Their action is considered as the best possible reflection of the citizens' will. The law then does not provide for any further participation in the planning of the highways. It only gives the procedures and establishes the citizen's right in the right-of-way acquisition phase of the work, amount of moving expenses, determination of the property value on the "prize a free willing seller would earn from a free willing buyer at that time" rule, and the like. Nevertheless, private citizen groups, businessmen and local politicians could and increasingly can influence the plans, merely because they address the "right" officials at the "right" moment with the "right" arguments. It is the concerned people's ability to choose all these three elements

properly whether they are economical (e.g., loss of tax base, moving out of businesses), social (relocation of people, disruption of neighborhoods) or environmental (use of green and open space, damaging of rivers and riverbanks) in character. The municipal and state elected officials will have to respond because it is their electorate. But, as far as I have observed until now, most if not almost all of the issues were dealing with a particular allocation problem of a freeway or major highway. The exact location was questioned because of the many reasons mentioned already or because of personal hardships. The fact, however, that freeways have to be built, that the automobile needs more space, is not questioned. Even in the cases where minority groups offended a freeway stretch through their neighborhoods with the slogan "no white roads through black neighborhoods", attacking therefore the suburban based commuter in his search to gain minutes of driving time, no alternative to the car-based transportation system is strongly recommended. The American public, has it made up its mind that the "car-only" transportation system satisfies the need best? Perhaps this is changing now in big cities, despite the fact that for at least one generation there existed no real choice among different modes. An indirect citizen participation can also be seen in the strongholds of non-governmental groups, generally known as "the highway lobby". I do not think so much about the many activities of the well known organizations like the American

Road Builders Association, the National Highway User Conference, or the professional American Association of State Highway Officials in Washington, D.C. or in the state capitals. I think, instead, about that constant never-ending advertising campaign spurred by the car producers, banks, insurance firms or gasoline distributors, urging everybody to drive a car and at the same time the almost complete absence of any attempt to use America's advertising capability for the promotion of Rapid Transit, commuter trains and the like. It seems to me that the Detroit situation reflects and accommodates to a remarkable extent the desire and need of the average, typical American, who is 16 to 65 years of age, holds a driver's license and earns enough money to drive a car. This group of people, making up what I would call "the ruling majority", obviously is satisfied with the system as such and opposes highway plans only in the case where it imposes unusual hardship upon people or business.

4. The Walter P. Chrysler Freeway in Detroit

When in 1956 the "Interstate Highway Act" came into existence, the Michigan State Highway Department and the City of Detroit Department of Public Works had already planned the city's freeway network. The freeway idea in Detroit dates back to 1944, at a time when the government was looking for new jobs to be ready for the changing economical situation after the end of World War II. The decisions for the first modern freeway, the Ford Industrial

Freeway (today Interstate 94) crossing the city east-west, were taken rather arbitrary, following old McGraw Street as a bypass of the expensive land in the CBD. The Detroit Area Traffic Survey in 1953 (also called the Carll Report) backed the earlier decisions with figures from the extensive origin and destination study. The north-south going John C. Lodge Freeway (today U.S. 10) also passed blighted slum areas west of the CBD. Both freeways were under construction and partially open to traffic in 1957, when John C. Mackie got elected Michigan Highway Commissioner, mostly because he promised the voters in the Detroit Metropolitan Area that he would not neglect the need for an urban expressway system, as did the former Highway Commissioner. The coincidence of two events helped Mackie to go about to carry out his plans: the 1956 Highway Act offering the 90% federal subsidy and the final report of the Detroit Metropolitan Area Traffic Study. Mackie announced a 10-year expressway plan for the Detroit Metropolitan Area, which proposed the spending of $632 million of federal and state funds to construct 81 miles of expressway (of which eight miles were part of the primary system and 73 miles part of the Interstate system). To expedite construction in the city of Detroit, a special agreement between the state, the city and Wayne County (of which the city is a part) had to be worked out. This agreement, known as the "Tripartite contract" was signed on May 20, 1958 after complicated and serious negotiations. It calls

for the construction of four projects in the city of Detroit (completion of the Lodge expressway, construction of the Fisher, Chrysler and Southfield freeways) at an estimated total cost of $300 million and the expenditure of $1 million for the planning of the fifth project, called the Detroit-Muskegon Expressway, (today known as the Grand River or Jeffries Freeway). The cost not borne by the federal government would be shared by the three parties (state 75%, Detroit 12.5%, Wayne County 12.5%) and financed through a bond issue on the part of the city and the county (the state has enough money in the Highway Trust Fund). Some discussion took place during the contract negotiations, whether or not to include the total length of the Chrysler Expressway into the package. At that time, 1957, Detroit had about eighteen miles of freeway open to traffic, the Ford Freeway from the western city limit to within a few miles of the eastern limit and the Lodge Freeway from north of the CBD to the beginning of James Couzens Highway in Detroit northwest. The Chrysler was in its planning stage with the design work carried out by city departments. Plans called for it to begin at the Civic Center and to proceed north along Hastings and Oakland Boulevard, interchanging with the Ford Freeway and further north with the Davison (the first limited-access highway built in Detroit in the late 1930's) until it reaches 8 Mile Road, the city limit. The traffic study of 1953 saw it very much needed to relieve Woodward Avenue (the most heavily traveled traffic

corridor in the state) from the traffic bound to the northern suburbs. But there were other reasons for the Chrysler project too: it was to be the final segment of the "loop" formed by linking the Ford and Lodge expressways and therefore surrounding the Central Business District. Mayor Cobo and councilmen wanted to respond to criticism of east-siders claiming that the western part of the Ford Expressway had preceded the construction of the eastern half and that the Lodge Expressway was built first to service the wealthier sections in northwest Detroit, by giving the promise that the next expressway to be built would be on the east side. Also, the Chrysler route passed through some of the city's worst slums, and its construction would assist urban redevelopment efforts which were under way to renew the downtown area, as well as to eliminate acres of urban blight north of the Ford Expressway. Further on it was possible to convince the Bureau of Public Roads to shift the Interstate from the Southfield Road to the Chrysler. This was again very appealing to the city because it opened the possibility to develop Southfield Road into an expressway in a more modest manner, using the existing right of way and saving a seven-mile long row of houses from condemnation. On the other hand, Detroit officials had some reservations concerning the extension north of the Ford interchange because this route would have to pass through Highland Park, a city completely surrounded by Detroit. The Detroit officials would have preferred to commit themselves

only after the route through Highland Park had been settled. But Mackie convinced them to the package deal. Mackie wanted a clear statement from the city to assure the completion of the freeway-network in the city, the key element to the metropolitan network, and Mayor Cobo wanted strongly the completion of the Fisher and southern part of the Chrysler in order to have a vehicle for re-development and enhancement of business in the near downtown areas. Finally the Tripartite contract was signed. It provided that before condemnation or construction could begin on any portion of a project, the route location for that portion must become "established" by submitting the proposed location to the three parties. If none of them disapproved it within 21 days by a simple veto, the route automatically would be established. It is worthy to state the fact that in August, 1971, with the opening of the first portion of the Jeffries Freeway (Lodge, Chrysler, Fisher, Southfield had been completed earlier) all five projects anticipated in this Tripartite Contract are being built.

Now having in short presented the overall situation concerning the Chrysler Expressway, I have to give attention to more detailed problems. For practical reasons the 9-mile stretch has to be divided into three parts:

a) Jefferson Avenue - Holbrook Avenue

This section, 4.49 miles long, establishes the link or "loop" between the Lodge Freeway from the Riverfront to the Ford Freeway

east of the New Center Area and extends further north along Oakland Boulevard to the city limits of Highland Park and Hamtramck, at Holbrook Avenue. The design for this section was done completely by city departments, especially the Department of Public Works, and was submitted to the state highway department in 1957. There was no public opposition to the project. The city offered the necessary land which has already been cleared for redevelopment purposes (Lafayette Park, Elmwood II, etc.).

b) Nevada Avenue to 8 Mile Road

This 1½ mile long northernmost portion also did not cause special problems. The state highway department based its plans on preliminary studies done by the city and made use from the fact that almost all the land needed belonged already to the city (old trolley camp and purposely acquired to prevent private development) or the state highway department. It was also the logical connection point on 8 Mile Road because here the state highway M-150 heading north began. The route location has been approved in 1965 together with the remaining third part.

c) Holbrook Avenue to Nevada Avenue

This approximately three mile long section required more planning effort, comparison of alternatives and numerous contacts with the three cities involved, Detroit, Highland Park and Hamtramck. Also the future rebuilding of the old substandard Davison freeway caused several more technical oriented problems. The preliminary

plans drawn by the city of Detroit proposed the route along Oakland Boulevard, but were rejected by the city of Highland Park because of the bad impacts on the Chrysler and Ford manufacturing plants and the taking of many business firms along Oakland Boulevard. There was the considerable possibility that Chrysler would move its plant to its own one square mile property in Troy. Also the expressway treatment for Oakland Boulevard did not conform with the Master plan of Highland Park. Three alternatives were finally compared: the depressed Oakland route, the elevated Oakland route using partially the air rights over railroad tracts, and the Dequindre route. The Dequindre route was then approved: it did not enter Highland Park but conformed with the Master plan of Hamtramck, it was the least costly because the property required was mostly low-value residential area, it provided the most flexibility for the design of the Davison interchange and it did not interfere with the railroad tracks (which belong to the major line on which raw material is moved into the three cities and cars are moved out). The public hearing held on this location matter in 1963 was attended by 350 people, and the one on the final design of the Davison Interchange in 1966 attracted 175 people. The concern was mostly with the effect on property values, relocation procedures and reimbursements and impacts on neighborhood business. There was no opposition to the freeway as such. Therefore, the parties involved were able to reach the decisions on engineering and political

considerations on a relatively high level. It was the respective officials of the three cities who influenced the ongoing work and set up their requirements. The amount of assessed valuation affected and the possible change on the tax roll of the cities were of high concern. The Dequindre route chosen required finally the taking of 952 one/two family homes, nine multiple family homes, 171 commercial buildings, 15 industrial establishments, one school and 28 churches and missions, more residential units but less of the other categories as compared to either Oakland route. The construction of the entire Chrysler Freeway within the city of Detroit and Hamtramck was completed between 1961 and 1969. Since its opening to traffic it has brought considerable relief to Woodward Avenue and other north-going thoroughfares. The accident record on this 8-lane freeway is very satisfactory (398 accidents and 1.2 fatalities per 1 million vehicle miles as compared to the surface street system in Detroit where the same figures are 1060 accidents and 4.7 fatalities respectively). The Chrysler Freeway is a good example of the many cases where basic agreement about the need of the traffic facility is reached at an early date and the inherent difficulties of the actual route location and final design have been worked out entirely within the governmental and political bodies involved. The only dismal thing occurred among the various property owners who did not know which land was to be acquired since the studying of alternatives and the political

discussions lasted many years, leaving these people in unpleasant uncertainty. In the Chrysler case, also, were no real socio-economic issues encountered since it followed mostly dividing lines of industrial and residential land use. The Chrysler, though, is not an example of the "freeway controversy" -- it is rather an example of a successful federal-state-local working relationship and effective technical management.

II. The Case of the "Sihl-Express-strasse" in Zurich

1. The Swiss situation

In 1956 the citizens of Switzerland voted overwhelmingly in favor of a completely new legislation calling for a "National Highway System" enabling the federal government to supervise and finance the planning and construction of a national system of some 4300 kilometers of new roads (1800 kilometers of that of the divided-controlled-access type). The public discussion about this immense undertaking (the idea was to spend annually $170 million in federal money, with $30 million of matching local funds) previous to the vote was extensive and covered a wide variety of related issues. The major concern though was given to the fact that neighborhing countries at that time (mainly Germany and Italy) already were carrying out the construction of a national system of freeways (Germany, "Bundesautobahn") or turnpikes (Italy, "Autostrada") or were seriously talking about getting started in the same way, (especially Austria with the "Brenner-autobahn"). This created the general fear that Switzerland no longer would be able to hold or improve its position as a major tourist country, the main flow of the new breed of motoring tourists choosing the new and fast roads "around" rather than merging with the slow and somewhat rural traffic in Switzerland at that time.

Serious consideration has also been given to the expected relief the new road system could and should bring to the many villages and towns along the old major highways in the country, which at that time were definitely insufficient, jammed with cars and trucks, dangerous, and dividing the communities more and more. Therefore the layout of the system shows that it is circumventing all settlements, even the cities, with the three exceptions of Zurich, Basel and Geneva. Its purpose is that of a regional thoroughfare or a national connector, doomed to serve the long-haul traffic in the first line. Only a few thoughts were given to whether or not this system will have an influence on commuter traffic.

Needless to say, the strong supporters of this system were the automobile clubs and tourist associations - backed by the automobile trade unions. On the other hand, opponents were among the farmers and some small groups of conservationists.

The legislation shows some striking similarities to the "U.S. Highway Act" of the same year. First, the federal government would not engage in the actual planning and executing work - this is given to the state agency of highways, usually part of the state's department of public works. The federal agency in charge of the supervision and coordination is the "Office of Road and River Construction" in the Department of the Interior. No special role for the municipalities was foreseen - it depends on the internal procedures of the states to what extent the local governments

shall be involved. The only requirement stated is the submission of the project plans and the possibility to give comments. But there is no legal obligation to act upon the municipal comments. On the other hand, the federal government will approve plans and forward the money for construction only when the submitted final project plans bear the signatures of the state executive council and the state's union of conservationists (which is a semi-public organization). This somewhat unusual but appealing safeguard device can be seen as a further national concern not to damage landscape and nature more than is absolutely unavoidable. It stays in line with another federal law which prohibits any cutting of trees in existing forests for any construction (roads, houses, farms, or whatever) as long as not the same amount of forest in closest proximity possible is planted at the same time at the expense of the construction which takes the existing forest in the first place.

The financing of this biggest single project of the federal government in Switzerland must sound familiar to Americans. There is a sales tax on gasoline and motor fuel of 15 Rp/liter (equal to 12¢/gallon) which is earmarked for the special "National Highway System Trust Fund". The states then receive federal money according to their financial strength. That means it is not one general split applied for the whole country. The state of Zurich will be reimbursed for 67% of the costs of its part of the national highway system -- the remainder has to be split half and half between the

state (16.5% therefore) and the municipality through which the national highway runs. The exceptional thing is that this is a "bound expenditure" which has to be paid without any public vote even if the amount in most cases exceeds by far that which in all other circumstances requires a public vote. The low share of federal money reflects the fact that the State of Zurich is one of the economic pillars of Switzerland and that more than one-half of each tax dollar spent by the citizens stays in its municipality. In economically poor mountain states like Uri on the Gotthard Pass though, the federal share would be as high as 92% of the total cost.

2. The organization of the planning work

2.1 The federal level

- The joint federal assembly, that is the legislature composed of the senate and the house of representatives, approves annually the amount of money in a lump sum which shall be released for planning and construction under the National Highway program (presently about $220 million = 900 million Swiss francs). This takes place at the time of the overall debate about the annual federal budget. The legislature acts upon proposal and recommendation of the federal council and in this special matter of an advisory commission, called "commission Hurlimann" after the name of its chairman.

- The federal council, the executive body, enacts the different projects to be undertaken according to the more detailed recommendations about the multi-year construction program, worked out by this "commission Hurlimann" and the responsible federal department. In our case this is the Department of Interior.

- The "commission Hurlimann" especially discusses the long-range construction program with regard to the overall final network, the overall capacity of the construction industry and the effects on the national economy (e.g. not to enhance the inflation). This commission, therefore, functions as a policy-maker and goal-setter and acts through the federal executive and legislature.

- The "Office of Road and River Construction" in the Department of Interior carries out the supervising and coordinating work within the ramification of the "National Highway legislation" and the policies established by the before mentioned federal actors. This office through its technical staff works together with the planners in the 22 states, reviews the final project plans and forwards them to the federal council for approval and release of the federal money.

- The Department of Finance and Customs finally administers the "National Highway Trust Fund" as well as the General Federal Budget. It forwards the money to the states upon agreement with the Office of Road and River Construction and in accordance to the state's need with regard to the on-going construction work.

2.2 The state level

- The state council which constitutes the state's legislature in most cases (e.g. Zurich), is not involved in this planning process, whether in policy matters or actual plan considerations. Very randomly it might happen that the state legislature asks the state executive to change details on project plans - but there is no legal power provided.

- The state executive council approves and forwards the project plans and financial requests together with the stated acceptance of the state's chapter of the Union of Conservationists, on behalf of the federal council. In all normal situations it will follow the proposals of the state agency in charge of the planning work. That is in general the state highway agency as a part of the state's Department of Public Works. But in case of public disagreement, the executive council may take a different decision, as of changing plans according to the publicly mentioned "mistakes" or as of ordering to re-study the problem. Whether or not such things happen depends on the political situation and the strength of the public arguments. By law the executive council can decide on its own, whether to accept the worked out plans of the agency or to listen to "outside" comments.

- The state department of public works organizes the planning, execution and financing of the National Highway System within its jurisdiction. In general the state highway agency is in charge of

carrying out the work, following the policies of the department. It also often negotiates with the municipalities, this at least in the state of Zurich, where the procedures require to send all relevant plans and studies to the affected communities for comments and suggestions, within a given time. If the community council feels that the proposed highway construction has bad impacts on the community, it may object, but the state executive council is not bound to that and may overrule the local government. Here I have to point out that the actual work in route location planning and highway design of a particular track of freeway generally is not done through the state highway agency. These are private engineering and planning consultant firms, often locally based, which are performing the job under the supervision of the agency and the state engineer. This implies the flexibility of having not only engineers working on the project, but also architects, economists or even sociologists and experts of the local scene if it is needed. That way it is possible from the beginning to work in non-engineering criteria. Also it is the established policy to circulate all plans and studies inside state government for all agencies to get to know the highway plans. Their comments too will be worked-in to every extent possible. In case of conflicts, it is the state engineer who is responsible for making the decisions and presenting the plans with the "pros and cons" to the state executive council.

On the other hand this explains why it is important for the state to seek agreement with the city of Zurich, either on the technical level where possible or on the political level in the more critical issues. Because the city of Zurich is the biggest municipality in Switzerland and in the state of Zurich with roughly 40% of its population, and because Zurich is also the state capital, interests are often woven together. The state executive just could not politically afford to oppose publicly the city council or the community council of Zurich or even private groups. It would rather set up a work team with state and city representatives to develop a compromise.

2.3 The municipal level, the city of Zurich

As already mentioned, the municipalities in general have only a small advisory role in the national highway planning process. Therefore it depends very much on their own initiative and imagination whether or not their point of view will be successfully heard or not. If a municipality is ready at the time the highway plans are to be presented and commented on, it has much better chances. In the case of the city of Zurich naturally there was already a lot of work done at the time the national highway plans came up for discussion. But because of the fractioned responsibilities for the development of the different plans inside city government (zoning plans with the Housing Department, street systems plans

with the Public Works department, public transit plans with the Department for Industrial Enterprises, etc.) even the city was not really "ready" to accept the plans, to integrate them, or to develop immediately their own proposals which would match with a city's comprehensive development plan. Obviously only few other communities had hired consultant work ahead of time and had developed a fairly elaborate community development plan. It is only because of the fact that local private engineering and architectural firms are working for the state highway agency that the planning work was somehow sensitive to community needs and a complete "concrete disaster" was avoided.

3. The role of citizens participation

Despite the fact that the "National Highway Act" does not provide for any further public vote on this matter and even though the money a community is bound to spend on its piece of freeway or national highway by far exceeds the normal limits where a vote has to be placed, citizen participation is more successful on the local level or sometimes on the state level than on the federal level. This is possible because of the practice of the state highway agency to present the project plans to the municipalities. The municipal government in general announces the plans to the general public to enhance private groups, business groups, unions and local newspapers to speak out and present their ideas and

comments. Also, all property owners are invited by letters to have a look at the plans, to discuss with the planners and to place objections or comments. Because the executive officials, both in the municipalities and in the state, are publicly elected, they have to be sensitive about all these public reactions. This is even so despite the fact that the same law also provides only limited legal possibilities for each affected property owner to go to court, and none of it for the respective renters. The court case can only be fought about the amount of compensation to the property owner, after condemnation of the property in cases where it is not possible to settle the financial agreement in advance. Still, angry citizens whether they are landlords or renters, seldom vote in favor of their subject of anger.

As you may read in between the lines, there are not so many problems as long as you cross mountain regions and rural low-density areas in the Midlands. Let's put aside for this case study the conflicts with consevationist groups and concerned citizens about the "saving of the landscape as such" which is, in a tourist country like Switzerland, a very serious and important issue. But in the high density urban regions where the freeway system is planned to enter even the core city like in Zurich and Basel, you have to deal with numerous and very active private groups of citizens (professionals, businessmen, neighborhoods and subdivisions, organized along political party lines or not). Their value judgment

is often somewhat different from that of the highway engineers. People not only question the particular freeway track, but also the overall system. "Is the freeway as such really needed - is there not another possibility to bring the workers and visitors into the city? Have we to bear noise and pollution and loss of green space since the commuters may win only some few minutes travel time?" These are often-heard arguments. Fortunately on the other hand, freeway construction very seldom causes problems of relocating people because highway engineers do everything possible to take as few houses as possible by placing the new roads on the edges or separation lines of the topography (it is occasionally cheaper that way but often even more expensive in our landscape and varying soil conditions). Also in the very technical sense the design of the freeways is "scaled-down", that is, to use as little land as possible, especially by defining a low design speed on the inner city sections (60 km/hour as compared to 120 km/hour outside) allowing short deceleration/acceleration lanes, narrow emergency lanes, and so on.

Now the citizens' objections, favorable comments or demands for faster construction of this freeway system have to be brought before the executives of the local and state level by means of newspaper articles, press communications, written petitions or personal inquiry of legislatures. If they can prove massive

support, they will have substantial influence on changing and refining the plans.

In the recent years we are experiencing such situations of confronting ideas in the city of Zurich more often and more explicit.

4. The "Sihl-Express-strasse" in Zurich

The national highway system was to connect regions in Switzerland with each other and to provide the crossroads for through traffic as part of the European road system. Because of the early traffic studies for a "general transportation plan for Zurich" of 1952, which showed that more than 90% of all vehicular traffic on the regional thoroughfares had its origin or destination in the city, the national freeway system was to go through the city instead of bypassing it. This inner city portion got the name "express-strassen-Y" because of the Y-like shape of the western, northern and southeastern legs to be connected with each other on the "traffic triangle Platzspitz" just north of the CBD. The plans to build the southeastern portion as a 3-mile long, 6-lane highway on an elevated structure in the path of the river "Sihl" leading from the outside of the city right along the fringe of the CBD to the "traffic triangle Platzspitz" were worked out by the state. The idea at that time was also to provide entrance/exit ramps from the elevated expressway to/from the major surface streets.

In 1958/1959 the plans were approved by the city council (with strong support from the city engineer) and the state executive council. The submitted plans were adopted by the federal government in 1961. By that time a private group of architects finally organized a strong and outspoken opposition, working out controversial alternatives, even after all these decisions by the executives were taken. Because it was an influential group, they did achieve the most unexpected: the whole problem of the innermost section of this expressway could be restudied by a joint working commission of federal, state and city officials. The respective state executive decision, enacted on September 15, 1966, was based upon a decision of the federal council of July 13, 1962, which stated that although it was agreed upon the general allocation plan for the freeways in the city of Zurich, further and more detailed planning work should be done for the first part of the Sihlexpressstrasse in order to obtain the necessary knowledge of whether to build this proposed elevated structure or to construct a tunnel for part of it or for the whole length under the river banks on the right or the left side of the river. Also it was stated that at that time, 1966, the problems of gathering, respectively dissemination of the expected high traffic volumes on the adjacent city streets has not been sufficiently studied. Furthermore, the questions of how to integrate such a traffic

facility into the urban landscape and the city fabric, the location of sizeable parking structures related to the system and similar other questions in urban design have not found a content answer. On this background the "joint planning Commission for the Sihlraum corridor" set up the general study program for a traffic planning working group and an urban design working group and prepared to deliver the final report within three years. The commission of 11 members (2 federal, 4 state, 5 city, representing agency heads) with a budget of $100,000 to pay the work of the private consultants, met regularly to define the direction of the work. Special interest was given to the economic effects at a later stage. An attempt was established to measure positive and negative effects upon property value in the corridor (40 ha = 30% is publicly owned) according to the different freeway proposals. It turned out that even with the modest increase/decrease of 10% of the current property value taken into consideration, overall long-term costs of the project changed significantly (10% decrease for areas with noise, air, and visible pollution, 10% increase for those close to the proposed parking structures and overall improved accessibility). The final figures as presented in the report of November, 1968 show that the alternative No. 4, the 1.4 mile long, 6 lane tunnel under the left bank of the river is to be recommended though the initial construction costs are the highest ($40 million) but the long-term economic gains also ($15 million

to $20 million). This alternative also provides enough freedom for all private landowners to develop according to their schedule - the expressway can be constructed within existing public right-of-way and it does not damage private buildings. The explicit idea to drop the old scheme of direct entrance/exit ramps to the city street in order to replace them with direct expressway-access to three parking structures of about 4000 car places each, will further enhance private development around these locations. Furthermore, the construction of this expressway tunnel will initiate the development of the river banks themselves to an inner city park also adding to the attractiveness of the Central Activity District which is expected to grow rapidly and to extend westward over the river. In 1969 the city and state executive councils both accepted these considerations and ruled in favor of the alternative which then finally was approved by the federal government too. The initiative of the private group eight years ago definitely was successful because the plans now are much better related to overall community needs and really part of a comprehensive development plan of the "Sihlraumkomdor" providing new incentives for private and public development including large office buildings, hotels, parking structures, subway line, park and green space along the river neglected in the past.

III. Analysis and Comparison

1. The political culture and its relation to the freeway planning process

1.1 In Detroit and the United States

As you have seen in the two case studies so far, there are distinctive differences between the two cities with respect to transportation planning issues. This despite the superficial similarities in the federal system, in the legal role of the states, and of the funding mechanism. Clearly in the U.S., the freeway planning process functions almost completely in a federal system of outspoken sets of policy and procedure memoranda. The general goals and objectives are effectively formulated and defined at the federal level, in the two subcommittees on roads and the Federal Highway Administration. The praised working relationship of civil-service engineers, the federal-state partnership, assures accurate carrying out of the policies, using standardized sets of planning tools and design features. Since the activities of the typical state highway department are "remote from politics" by virtue of the separate funding and the long-term appointments of the commission members, there is not much interference with day to day state politics. The role of the local governments is not foreseen in the federal legislation. It is to the discretion of the states whether or not to involve localities in the planning process earlier than at the time of final plan approval. Citizens and business communities attend public hearings generally in

rather small numbers. (An average of 250 people in the three public hearings on the subject of the Chrysler freeway has to be considered as a typical attendance). In the transportation field, though, the role of the bureaucracy is of much more importance than the role of politicians - a unique situation compared with other related fields like urban renewal or education. As I understand it, there are two principles confronted here: first, Americans believe in home rule, that is to say that all decisions in public matters should be made at the lowest possible level, and second, that there should be a high level of popular participation in those decisions. In general this is accomplished through the active engagement of elected politicians in even rather minor questions and the dialogue with citizen groups of all kinds thereupon. This general understanding is aimed at strengthening the politician and diminishing the influence of the bureaucrats. This scheme applies also for programs with massive federal funding and incentives, e.g., urban renewal where the specific programs developed for a community are locally produced and to a large degree under control of the local political process of the city. Urban renewal programs therfore seem to be reflective of the prevailing political situation of the city at the time of local approval. Now, why is this not the case with transportation? There are several elements to be mentioned. The first reason is that urban transportation is a function without

a government - it is undoubteful a policy area which is metropolitan in scope and cannot be dealt with adequately at the municipal level (let aside the few exceptions where the city is almost identical with the metropolitan area, e.g. Houston, Texas). Because of this, it operates somewhat outside the normal political process characteristics. The second reason is that highway programs, run by semi-autonomous commissions, are shielded from the influence of local and state elected officials. Remember also the even more autonomous authorities for bridges, tunnels, turnpikes, transit, who are essentially reporting to no one. As a result of the somewhat anachronistic view that important programs should be removed from politics, i.e. executive control, this tends to remove the program from any requirement to be responsive to the voters. Third, the politicization of transportation decisions is limited, and not related to other policy areas which it affects and which affect it. Even more so, transportation decisions with regard to one aspect, e.g. urban freeway, are not related to those made about others, e.g. mass transit systems. Fourth, all operating agencies in the field take into consideration only a narrow range of outside interests, mostly users and beneficiaries in the most direct sense, establishing evaluation procedures for the developed alternative plans on the basis of cost benefit analyses dealing with construction costs, land acquisition costs, relocation costs and the like versus gains in driving costs and lower accident rates.

This all sums up to that in general transportation decision-making is inconsistent with the otherwise established principle of home rule in the U.S. This situation is changing, however, in the way that innovative central city leadership is bringing about state legislation which allows more and more local control in transportation matters, e.g. state of Maryland created first a state department of transportation including the former highway department and secondly changed the ends of the trust fund to finance all modes of transportation thus backing the opportunity for local and state leadership to make a real choice.

Coming back to Detroit and the case of the Chrysler freeway, we see that there was no conflict between city officials and the state highway commissioner apparent. The hesitation on the part of the city to include the northern portion was due to the fact that Detroit officials did not want to harass Highland Park officials by fixing everything without their consent. The advantageous proposal, though, to shift the Interstate designation from the Southfield Road to the Chrysler route could not be neglected. It saved the city from a big loss on its tax base allowing to improve Southfield Road without tearing down hundreds of sound high value homes, enabling it instead to coordinate urban renewal programs near downtown with the freeway construction and to get rid of acres of already abandoned houses north of the Ford Interchange. Unlike other locations, the Chrysler route location in the final

version through Hamtramck instead of Highland Park did not touch very sensitive business communities or explicit neighborhood groups, as it was especially the case along the James Couzens Highway in the route of the Lodge freeway or in Harper Woods in the path of the Ford freeway. Therefore, it is clear that in the case of the Chrysler freeway the freeway planning process as established by the state highway department and refined in the Tripartite contract, was consistent with the objectives of the politically relevant public. Remember that Commissioner Mackie was elected with strong support from Wayne County voters, backing his drive to build urban freeways in the Detroit Metropolitan Area. The public at that time clearly wanted freeways and was (and still is?) evidently apathetic about public transit (while, perhaps, not understanding the implications of such a system). Also at that time the politically relevant public was that of the middle class, and it is only in more recent years that, for a variety of reasons, lower income groups whose transportation needs and desires are not known yet really, are developing greater political power.

1.2 In Zurich and Switzerland

How does the political culture in Switzerland contrast with the U.S. situation with respect to transportation? To begin with, home rule also is regarded as of high value and importance. Together with the overall notion that power in any sense (political,

economic) should not be concentrated too much, it also should stay as close to the citizenry as possible. Across the board, citizen involvement is essential for the proper functioning of all levels of government. It is especially true, though, within the municipalities. This constant and intimate participation of the citizens is reflected in the many constitutional and legal cases which require a public vote in the affected jurisdiction (whether that is the municipality, the state or the country as a whole). Not only are the executive and legislative branches of government of all three levels publicly elected (for four year terms typically) but also every major governmental action has to be brought to a public vote (major capital expenditures, every change of law or state or federal constitution, founding of any special purpose agency, etc.). This strong belief in home rule has the effect that the federal government runs comparatively few community-oriented programs (mostly limited to the fields of agriculture and forestry as a means to balance regional differences). Health, education and welfare are almost completely a matter of the states and municipalities, and it does not sponsor any kind of urban renewal and only recently it developed a program to help the housing market - a direct consequence of the fact that Switzerland very fortunately does not know slums and urban blight. In the field of transportation, however, the federal government has resumed a somewhat stronger position, especially since the

National Highway Act of 1956. This is because the major railroad network as well as the postal service with an immense network of postal motor coaches are federally owned and operated, because it helps financing practically all privately owned railroads (but no other bus company) and it regulates all water and air traffic in the country, but does not own any company. (The national airline is privately owned and operated - about forty percent of the stock, however, is in the hands of the state of Zurich and several municipalities). The exceptional move of the Swiss voters to accept the legislation which gave the states so much legal power to go ahead with the national highway system shows only that this undertaking was understood as national and regional in scope and as a means to pool the necessary financing. As quoted earlier, it is only due to the very different manner in which the route location planning and design work is technically (and if you want, philosophically) performed. It is not a group of dedicated civil service engineers all the way down the line who do the whole work and develop that "esprit de corps" across all levels of government. The work is done by mostly locally based engineering firms under the supervision of state government engineers, ensuring in that way local input already. It is also a different situation whereas every state tries hard to get its idea and concept through in the federal government instead of merely carrying out federal policies.

With regard to the situation in Zurich and the "Sihlexpresstrasse" it is clear that the previous plan to build the elevated freeway through the city in the path of the river was not consistent with the overall interest among strong citizens groups. It was at that time consistent with the traffic network plan and the land use plan of the city, but it was obviously too narrowly conceived. It was an outcome of pure cost-benefit analysis which for this group of influential citizens was no longer acceptable. Now I think it reflects to a good extent the political culture of the Swiss situation as a whole, that it was possible to achieve the restudy program and finally to overthrow the first plans on the basis of community development arguments (impacts on land value, visual environment, noise, economic incentives for private and public landowners) despite the high initial costs. The credit goes to all three levels of government, because all had to revise earlier decisions and all had to take over heavier financial burden. The case of the "Sihlexpresstrasse" is only indirectly related to the more and more growing concern in Swiss cities about the consequences of different transportation policies. It seems to me that the general public has agreed already to the following: improvements in transportation facilities shall avoid damage to the human environment to every extent possible - if necessary regardless of costs. That means that the public would not accept a freeway in the city which would visually and physically

cut off any part of the city from another. (There are numerous cases that prove this claim today). If the planners and engineers do not find a solution which satisfies this overall requirement to an acceptable degree, the probability is almost 100 percent that their plans will be defeated. It is this understanding which made it relatively easy for the city and the state executive councils to accept the tunnel alternative with the high initial cost. The federal government finally agreed to it because it is established that it will accept those plans which seriously prove to be elaborate and sound for the locality. That is not to say that the federal government just took it as such without discussing the costs involved, but the final negotiations came to an end with the idea in mind that the "best" physical solution to this given problem shall be built. The political culture of the citizens in large, though, had its impact on the freeway planning process in this case. It did not involve directly the question of different modes of transportation -- but this was underlying in that the freeway shall be built if it does fulfill all those requirements. If it does not, the movement of people and goods will be assured through other modes of transportation. Explicitly this is true with regard to commuters: improvements for them shall be directed to public transit (subway, streetcars, buses), commuter trains, park and ride, etc.

2. Decision-making versus opinion-making

By choosing this subtitle I would like to emphasize one major difference in the political climate between the U.S. and Switzerland. Using the Chrysler case and the Detroit area situation I would argue that the results transportationwise came about because of a logical decision making process. Detroit introduced the mass production of automobiles as well as the idea to let it be used by everybody for every purpose (e.g., Henry Ford's five-dollar-a-day wage guarantee). Consequently, Detroit had to cope with the ever increasing demand for street improvements of which the early freeway construction is a good testimony. Furthermore, the city master plan which was worked out in the late 1940's and approved in 1951 included a freeway network for the city which later on experienced only minor changes as the outcome of the big origin destination study of 1953/1955 was evaluated. With all this preliminary and preparatory work done by the city with the consensus of the Wayne County Road Commission (which in turn acted as the direct representative of the state for the planning, construction and maintenance of the state trunklines, the primary and secondary road system), it was fortunate that the interests of the state highway department turned from the more rural to a metropolitan point of view. What was a clear concept locally, was coincident with the development on the federal level. Since Detroit has to be considered as the home of the automobile, it

was clearly in the overall interest of the city when the country started out for a new strive to enhance car-transportation. Furthermore, the machinery to carry out the plans was already established. Federal guidelines and policies were clear in most instances and expediently translated into actual plans and construction work. It is the mandate of the public elected officials in the capitol as well as the ingenious financing mechanism of the road-user taxes which gave and give all professionals the justification "to do the job". If difficulties on a particular piece of freeway arose, the argument that this was part of a "complete system" and that it reflected "the people's will" was ready and most often convincing. It is now a phenomenon of the recent years that this reasoning and the related planning process is to be questioned. Only when the freeway program and the absence of a transit program began to get in conflict with other major values of the culture, did transportation as a whole rise high on the local politician's agenda (especially, though, in the older cities on the East and West coasts). Integrity of neighborhoods, freedom of choice among different modes of transportation, quality of the visual environment, air pollution, preservation of a city's heritage shown in historic districts, viability of a truly urban life style, these are values which can be threatened, but have not yet been included in the decision-making process to the full extent possible (knowing quite well that there are still many problems not

solved today when trying to deal with these values in any quantitative method otherwise proven so successful to highway engineers and transportation planners in this country).

In the Zurich case, I would argue that the results came about because of a different process, accurately tagged "opinion-making process". This means that the outcome, the actual construction plan, is not a consequence of straight forward planning and action. It is due to a mixed network of interaction of public and private interests. It is true, however, that the Swiss people voted in favor of a clear mandate to plan and build a National Highway System aimed to improve the regional connections, but it is also true that the same people also voted in favor of several legislations providing financial help to the railroad industry. The general opinion of the public is such that the freeway is necessary for the middle and long distance traffic and therefore shall rather bypass than intersect an existing settlement. That in turn explains why the opinions in the case of Zurich are diversive. One group, represented through the business community, understands the inner city expressway system connected with sufficient parking space as a favorable means to enlarge the CBD's area of influence, attracting customers and other businessmen from an even larger hinterland. Another group does not go along with this point of view, arguing that such a road system would attract much more cars then ever could be accommodated, therefore jamming the surface

streets even more which also affects the streetcar and bus system in a bad way. They would rather like to see the money spent for transit improvement and fast construction of park-and-ride terminals at the outskirts of the city. A third group then is questioning the feasibility of the route-location and timing. They would prefer to build the beltway outside Zurich before intruding the inner city. The politician on the minicipal or state level gets to hear all these different opinions. The critical point to him, and to the planners as well, is therefore to which argument he shall be the most sensitive. Since it will be time-consuming planning work, that opinion in the public might well change over the years and is therefore unpredictable. I have to mention here another peculiarity in Switzerland: the various levels of government are not committed to pursuing articulated, long-range government programs or party platforms. The issues can be brought to interest from all sides: the government, the administration, a citizens committee, the news media, and especially the press. Because of these many sources of ideas and action it is hardly possible to pinpoint the critical path of decision-making. The only method to get to know about most prevailing opinions and to draw upon the most probable guess of future incidents is to enlarge information in both ways from and to the planner/politician. It is the degree of information on a given subject and the level of collective understanding of its context which encounters

success or failure. To come back to the issue of the "Sihl-expresstrasse" it is necessary to stress the fact that the city population at large will have to vote on big expenditures along with the recommended tunnel solution (that is not for the road as part of the National Highway System but for many improvements to convert the riverbanks into recreationwise useful space, adjusting city streets and probably some parking space) and therefore it is indispensable to involve the population in the opinion-making process. According to the stated notion that "only the best is good enough" and because fortunately one can observe that kind of faith in progress which is a prerequisite for any achievement, chances are that it will demand the best solution, and it will be willing to pay the necessary price. The government then will be happy to accept this "verdict" against its original decision in order to follow the major public opinion.

3. How to achieve transportation plans consistent with community goals?

In the U.S. situation as described in short terms so far, transportation decision making is unique in that it is removed at least from local politics and it is done without citizens participation. It is therefore not following the general pattern implied in "home rule". Most communities in this country are striving for more citizen participation in the development plans of their community. But because of the parochialness of the highway-funding and the tight national regulations it is impossible

to make a free choice. Certainly the planners and local politicians should join forces to urge the federal government to restructure transportation financing. As far as I know, it is only since 1956 that road-user taxes are solely put into the trust fund. Before that the federal gas tax was paid into the general fund. Maryland has proven just now that such an undertaking on the state level too is not impossible. The combination of all agencies in one Department of Transportation is done already on the federal level and is on the verge in many states, including Michigan. The other important step, then, would be that transportation issues have to be discussed and evaluated by local citizens and politicians in advance, similar perhaps to urban renewal issues. What I am advocating, though, is a way in which an opinion-making process would take place in a city like Detroit, where established ideas about one-mode transport systems no longer remain unquestioned. I am positively sure that the American public, given the information, the opportunity and the local political influence, will develop a transportation proposal which will serve more than the average car driver. It will reevaluate the impacts on the social and physical environment in cities and high-density areas. Truly traffic facilities cannot be handled separately from other aspects of planning. The 1968 Highway Act has laid the groundwork for the "Joint Development". The total potency of that idea, however, will only come through if the money necessary

is not bound to narrow tasks ("highway only"). If "home rule" is applied to transportation, I am sure that it can be consistent with community plans and that it therefore as a whole will serve all segments of its population.

In Switzerland and in Zurich this local control in the field of transportation is achieved to quite an extent. Here we are facing a different problem which can be solved by learning from other U.S. experience. American planners have already developed very sophisticated methods to estimate future traffic demands and to evaluate metropolitan traffic networks according to that. Some firms are just refining these tools by introducing new feedback mechanisms. That means in essence that the outcome of an overall network study will be tested on a small-scaled local basis of neighborhood size. The conflicts of the overall plan with the detail plans can be detected and resolved by adjusting the overall plan in succeeding phases of refinement. This method will be especially useful if it is able to accommodate accurately the modal choice and if it helps to show the influence and the degree of interdependency of different choices and courses of action. In the Zurich situation this would give the planner more quantifiable information which he undoubtedly needs to back his advice to politicians and the public. The difficulty then remains that there will be a growing gap between the increasing and more sophisticated information the planners get through all the methods

of systems analysis, planning, programming and budgeting systems and the like, on the one hand, and the limited capacity of the opinion-making-process with the general public, on the other hand.

It will need the real dedication of the planner to bridge this gap, and it also will need time to educate or inform the public with as many details as possible in a way that it can be grasped. That means, by virtue of the capabilities of both sides, that we have to orient ourselves mostly to broad issues of middle-range importance suitable for explication in easy understandable terms. To assure success it is indispensable to institutionalize the public debate in regular intervals about the community development plan (which might be composed of a set of policies and a comprehensive physical plan). It will be possible to integrate transportation plans with broad objectives in the goal-setting process of a community and make them consistent with these goals.

This comparison, therefore, is to prove that planners in both countries in effect can gain useful knowledge by exchanging their experiences, though they are of a different nature. In this particular field of professionalism it is the technical expertise of Americans which should be applied in Switzerland to a greater extent and with more trust, and it is the long-proven process of gaining majority support on the basis of

minority respect experienced in Switzerland which might be successful in the American situation as well.

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